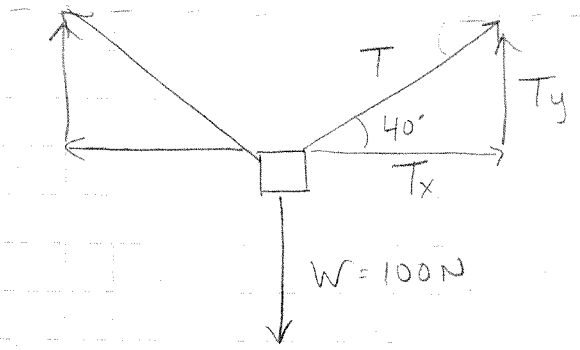
P #16

$W = 100\ N$
$\theta_1 = \theta_2 = 40°$



Find T_y:

$$T_y = \frac{W}{2} = \frac{100\ N}{2}$$

$$T_y = 50\ N$$

Find T:

$$\sin\theta = \frac{T_y}{T}$$

$$\sin 40° = \frac{50\ N}{T}$$

$$T = 77.8\ N$$

Tension in each cable = 77.8 N